What is claimed is:

1. A medical image reading system comprising

a plurality of diagnostic clients provided with an image output means which outputs image data to be examined as a visible image, and a diagnosis input means for inputting individual diagnoses obtained on the basis of visible images,

at least one management client provided with a result output means for outputting result of examination obtained on the basis of the individual diagnoses, and

a server provided with an image storage means and a result storage means which are connected to the diagnostic clients and the management client by way of a network, the image storage means storing image data to be examined and the result storage means storing results of examination obtained on the basis of the individual diagnoses with the results of examination related to the image data, wherein

each of the diagnostic clients receives the image data to be examined from the server by way of a network, outputs the image data to be examined through the image output means and sends individual diagnoses input through the diagnosis input means for the respective images represented by the image data to be examined to the server by way of the network,

the server causes the result storage means to store results of examination obtained on the basis of the individual diagnoses sent from the respective diagnostic clients, and

the management client receives the result of examination

from the server by way of the network and causes the result output means to output the same.

2. A medical image reading system as defined in Claim 1 in which said server is further provided with an informing means which, when the server receives a predetermined number of said diagnoses, sends information to the effect that the server has received a predetermined number of said diagnoses to the management client and the management client is provided with an information output means which receives the information and outputs the same.

3. A medical image reading system as defined in Claim 1 in which said server further comprises an automatic determination means which automatically makes examination for a given piece of image data on the basis of all or part of the individual diagnoses received and outputs result of examination.

4. A medical image reading system as defined in Claim 3 in which, each of the diagnostic clients is provided with a function of sending data on the doctor in charge together with the relevant individual diagnosis to the server so that the automatic determination means makes examination weighting the individual diagnoses according to the doctor in charge.

5. A diagnostic client for a medical image reading system defined in Claim 1 which client is connected by way of a network to a server provided with an image storage means which stores image data to be examined and a result storage means

76

which stores results of examination obtained on the basis of

the individual diagnoses, and comprises

a data receiving means which receives the image data to

be examined from the server,

5   an image output means which outputs the image data to

be examined as a visible image,

a diagnosis input means for inputting individual

diagnoses obtained on the basis of visible images, and

a data sending means which sends the individual diagnoses

10   input through the diagnosis input means to the server.

6. A diagnostic client as defined in Claim 5 in which

said data sending means sends data on the doctor in charge

together with the relevant individual diagnosis to the server.

7. A management client for a medical image reading

15   system defined in Claim 1 which client is connected by way of

a network to a server provided with an image storage means which

stores image data to be examined and a result storage means

which stores results of examination obtained on the basis of

the individual diagnoses, and comprises

20   a data receiving means which receives results of

examination from the server, and

a result output means which outputs the results of

examination received by the data receiving means.

8. The management client as defined in Claim 7 in which

25   said data receiving means is further provided with an

information output means which receives information to the

effect that the server has received a predetermined number of

said diagnoses from the server and outputs the same.

9. A server for a medical image reading system defined

in Claim 1 which server is connected by way of a network to

5   a plurality of diagnostic client and at least one management

client and comprises

an image storage means which stores image data to be

examined,

a data sending means which sends the image data stored

10   in the image storage means to the diagnostic clients,

a data receiving means which receives from the diagnostic

clients individual diagnoses obtained on the basis of the image

data to be examined, and

a   result   storage   means   which   stores   results   of

15   examination obtained on the basis of the individual diagnoses

with the results of examination related to the image data to

be examined, wherein

said data sending means is further provided with a

function of sending to the management clients the results of

20   examination stored in the result storage means.

10. A server as defined in Claim 9 in which said data

sending means is further provided an information sending means

which sends to the management client information to the effect

that the server has received a predetermined number of said

25   diagnoses.

11. A server as defined in Claim 9 in which said data

78

sending means is further provided with an automatic determination means which automatically makes examination for a given piece of image data on the basis of all or part of the individual diagnoses received and outputs result of

5   examination.

12. A server as defined in Claim 11 in which said data receiving means receives data on the doctor in charge together with the relevant individual diagnosis from the diagnostic client, and

10   the automatic determination means makes examination weighting the individual diagnoses according to the doctor in charge.

13. A program for causing a computer to execute processing of sending image data to be examined stored

15   in an image storage means to a diagnostic client,

processing of receiving individual diagnoses obtained on the basis of the image data to be examined sent from the diagnostic client,

processing of storing in a result storage means results

20   of examination obtained on the basis of the individual diagnoses with the results of examination related to the image data to be examined, and

processing of sending the results of examination stored in the result storage means to the management client.

25   14. A program as defined in Claim 13 for causing a computer to further execute processing of sending to the

management client information to the effect that a predetermined number of said diagnoses has been input.

15. A program as defined in Claim 13 for causing a computer to further execute processing of automatically making examination for a given piece of image data on the basis of all or part of the individual diagnoses received.

16. A program as defined in Claim 15 in which

the automatic examination is made weighting the individual diagnoses on the basis of data on the doctor in charge sent from the diagnostic client together with the individual diagnoses.

17. A medical image reading method comprising the steps of

storing image data to be examined in a server which is provided at a place remote from a plurality of diagnostic clients and connected to the diagnostic clients by way of a network,

causing each of the diagnostic clients to receive a desired piece of image data out of the image data stored in the server and to output the desired piece of image data as a visible image,

inputting individual diagnoses obtained on the basis of the output visible image through the diagnostic clients,

sending the individual diagnoses to the server,

storing in the server results of examination obtained on the basis of the individual diagnoses sent thereto with the

results of examination related to the pieces of image data, and

causing a management client to receive the result of examination for a desired piece of image data stored in the server and to output the same.

18. A medical image reading method as defined in Claim 17 further comprising the step of

causing the server, when the server receives all the diagnoses, to send information to the effect that the server has received all of said diagnoses to the management client.

19. A medical image reading method as defined in Claim 17 in which the result of examination is weighted by individual diagnoses..

20. A centralized medical image storing system comprising

a plurality of clients each of which is provided in a medical facility, provided with an image input means for inputting medical image data obtained by a digital image data generating apparatus, and transfers medical image data by way of a network, and

a server which is connected to the clients by way of the network and provided with an image storage means and an online accounting means, the image storage means storing medical image data sent from the clients and the online accounting means automatically outputting accounting information for medical facilities,

wherein the improvement comprises that

each of the clients is provided with a function of sending a request for receiving a desired piece of medical image data out of image data stored in the image storage means to the server,

5 the server is provided with a function of sending the desired piece of image data to the client which sends the request in response to receipt of the request, and each of the clients is provided with an image output means which outputs as a visible image the desired image data sent from the server.

10 21. A centralized medical image storing system as defined in Claim 20 in which the image output means further outputs as a visible image the medical image data input through the image input means.

22. A centralized medical image storing system as 15 defined in Claim 20 in which the accounting information includes storage cost for the medical image data which the medical facility holds in possession.

23. A centralized medical image storing system as defined in Claim 20 in which the digital image generating 20 apparatus and the client are rented to the medical facility and the accounting information includes a rent for the digital image generating apparatus and the client.

24. A centralized medical image storing system as defined in Claim 20 in which the accounting information 25 includes a data fee imposed on the medical image data used through the client.

82

25. A centralized medical image storing system as defined in Claim 20 in which the storage means comprises a high-speed storage means and a low-speed storage mean and the high-speed storage means can transfer the medical image data stored therein to the client at a high speed while the low-speed storage means can transfer the medical image data stored therein to the client at a low speed.

26. A client for a centralized medical image storing system defined in Claim 20 comprising

an image input means for inputting medical image data obtained by a digital image data generating apparatus,

a first data sending means which transfers the medical image data input through the image input means to a sever by way of a network,

a second data sending means which sends a request for receiving a desired piece of medical image data out of image data stored in the server to the server,

a data receiving means which receives from the sever the desired piece of medical image data as based on the request sent from the second data transfer means, and

an image output means which outputs as a visible image the desired piece of medical image data received by the data receiving means.

27. A client as defined in Claim 26 in which the image output means further outputs as a visible image the medical image data input through the image input means.

28. A server for a centralized medical image storing system defined in Claim 20 comprising

a first data receiving means which receives medical image data from a plurality of clients by way of a network,

5   a storage means which stores the medical image data received by the first data receiving means,

a second data receiving means which receives a request for receiving a desired piece of medical image data out of image data stored in the server from the clients,

10   a data sending means which sends to the clients the desired piece of medical image data as based on the request received by the second data receiving means, and

an online accounting means which automatically outputs accounting information for medical facilities equipped with
15   the clients.

29. A server as defined in Claim 28 in which the accounting information includes storage cost for the medical image data which the medical facility holds in possession.

30. A server as defined in Claim 28 in which the digital
20   image generating apparatus and the client are rented to the medical facility and the accounting information includes a rent for the digital image generating apparatus and the client.

31. A server as defined in Claim 28 in which the accounting information includes a data fee imposed on the
25   medical image data used through the client.

32. A server as defined in Claim 28 in which the storage

means comprises a high-speed storage means and a low-speed storage mean and the high-speed storage means can transfer the medical image data stored therein to the client at a high speed while the low-speed storage means can transfer the medical

5   image data stored therein to the client at a low speed.

33. A program for causing a computer to execute processing of sending medical image data to a sever by way of a network,

processing of sending a request for receiving a desired

10   piece of medical image data out of image data stored in the server to the server, and

processing of outputting as a visible image the desired piece of medical image data.

34. A program for causing a computer to execute

15   processing of receiving medical image data from a plurality of clients by way of a network,

processing of storing the medical image data received,

processing of receiving a request for receiving a desired piece of medical image data out of image data stored in the

20   server from the clients,

processing of sending to the clients the desired piece of medical image data as based on the request received, and

processing of automatically outputting accounting information for medical facilities equipped with the clients.

25   35.   A centralized medical image storing method comprising the steps of

inputting medical image data obtained by a digital image data generating apparatus through a plurality of clients each of which is provided in a medical facility, transferring the medical image data to a server by way of a network,

5   storing the medical image data in the server,

causing the clients to send a request for receiving a desired piece of medical image data out of image data stored in the server to the server,

causing the server to send the desired piece of image

10   data to the client which sends the request in response to receipt of the request,

causing the clients to output as a visible image the desired image data sent from the server, and

causing the server to automatically output accounting

15   information for medical facilities.

36. A method as defined in Claim 35 in which the accounting information includes storage cost for the medical image data which the medical facility holds in possession and is stored in the server.

20   37. A method as defined in Claim 35 in which the digital image generating apparatus and/or the client are rented to the medical facility and the accounting information includes a rent for the digital image generating apparatus and/or the client.

25   38. A method as defined in Claim 35 in which the accounting information includes a data fee imposed on the

medical image data which is stored in the server and used through the client.

39. A medical information storing and accounting system comprising

a plurality of clients each of which is provided in a medical facility, receives medical image data by way of a network and is provided with an image output means which outputs as a visible image the medical image data received, and

a server which is connected to the clients by way of the network and provided with an image storage means which stores medical image data and an online accounting means which automatically outputs accounting information for medical facilities,

wherein the improvement comprises that

each of the clients is provided with a function of sending a request for receiving medical image data related to a predetermined examination out of image data stored in the image storage means to the server,

the server is provided with a function of sending, to the client which sends the request, image data as requested by the client, and

the accounting information output by the online accounting means includes a data fee determined examination by examination.

40. A medical information storing and accounting system as defined in Claim 39 in which each of the clients is arranged

to send, to the server, purpose information representing the purpose of examination together with the request for receiving medical image data related to the predetermined examination, and

5   the server is arranged to send to the client medical image data related to the predetermined examination within an available range determined purpose by purpose on the basis of the purpose information with the data fee determined by purpose of examination.

10   41.   A medical information storing and accounting system as defined in Claim 39 in which the available range is a range related to one or more of the kind of images, the pixel density of images and image processing right.

      42.   A medical information storing and accounting system as defined in Claim 39 in which

15   the server further comprises a report storage means which stores a report on the medical image data,

      each of the clients further comprises a report output means which receives a report stored in the report storage means

20   and outputs it, and

      the server sends, to the client, image data as requested by the client together with the report on the medical image data.

      43.   A medical information storing and accounting system

25   as defined in Claim 39 in which

      the server further comprise a report storage means which

stores a report on the medical image data,

each of the clients further comprises a report output means which receives a report stored in the report storage means and outputs it, a report input means for inputting a report and a function of sending, to the sever, the report input through the report input means,

the server sends, to the client, image data as requested by the client together with the report on the medical image data, and

the available range is a range related to one or more of the kind of images, the pixel density of images, image processing right and report input right.

44. A client for a medical information storing and accounting system defined in Claim 39 comprising

a data sending means which sends a request for receiving medical image data related to a predetermined examination out of image data stored in a server connected thereto by way of a network,

a data receiving means which receives, from the server, medical image data as requested by the request for receiving medical image data sent by the data sending means, and

an image output means which outputs as a visible image the medical image data received by the data receiving means.

45. A client as defined in Claim 44 in which the data sending means sends, to the server, purpose information representing the purpose of examination together with the

request for receiving medical image data related to the predetermined examination, and

the data receiving means receives image data related to the predetermined examination within an available range determined purpose by purpose on the basis of the purpose information.

46.   A client as defined in Claim 44 further comprising a second data receiving means which receives a report on the medical image data stored in the server, and

a report output means which outputs the report received by the second data receiving means.

47.   A client as defined Claim 44 further comprising

a report input means for inputting said report and

a function of sending, to the sever, the report input through the report input means.

48.   A server for a medical information storing and accounting system defined in Claim 39 comprising

an image storage means which stores medical image data,

a data receiving means which receives a request for receiving medical image data related to a predetermined examination out of image data stored in the image storage means from a client connected thereto by way of a network,

a data sending means which sends, to the client, medical image data as requested by the request for receiving medical image data received by the data receiving means, and

an online accounting means which automatically outputs

accounting information for the medical facility equipped with the client, the accounting information including a data fee determined examination by examination.

49. A server as defined in Claim 48 in which the data sending means sends medical image data within an available range determined purpose by purpose on the basis of the purpose information which represents the purpose of examination and is sent from the client together with the request for receiving medical image data related to the predetermined examination with the data fee determined by purpose of examination.

50. A server as defined in Claim 49 in which the available range is a range related to one or more of the kind of images, the pixel density of images and image processing right.

51. A server as defined in Claim 49 which further comprises a report storage means which stores a report on the medical image data, and

sends, to the client, image data as requested by the request for receiving medical image data together with the report on the medical image data.

52. A sever as defined in Claim 49 which further comprises a report storage means which stores a report on the medical image data, and sends, to the client, image data as requested by the request for receiving medical image data together with the report on the medical image data, and in which the available range is a range related to one or more of the

kind of images, the pixel density of images, image processing

right and report input right.

53. A program for causing a computer to execute

processing of sending a request for receiving medical

image data related to a predetermined examination out of image

data stored in a sever by way of a network to the server,

processing of receiving medical image data as requested

by the request for receiving medical image data, and

processing of outputting as a visible image the medical

image data received.

54. A program as defined in Claim 53 for causing a

computer to further execute

processing of sending, to the server, purpose

information representing the purpose of examination together

with the request for receiving medical image data related to

the predetermined examination, and

processing of receiving medical image data related to

the predetermined examination within an available range

determined purpose by purpose on the basis of the purpose

information.

55. A program for causing a computer to execute

processing of storing medical image data,

processing of receiving a request for receiving medical

image data related to a predetermined examination out of image

data stored in the image storage means from a client connected

thereto by way of a network,

processing of sending, to the client, medical image data as requested by the request for receiving medical image data received by the data receiving means, and

processing of automatically outputting accounting

5   information for the medical facility equipped with the client, the accounting information including a data fee determined examination by examination.

56.   A program as defined in Claim 55 for causing a computer to further execute

10   processing of sending medical image data related to the predetermined examination within an available range determined purpose by purpose on the basis of purpose information sent from the client together with the request for receiving medical image data, and

15   processing of determining the data fee examination by examination.

57.   A medical information storing and accounting method comprising the steps of

storing image data in a server connected by way of a

20   network to a plurality of clients each of which is provided in a medical facility,

sending, from the server to the client which sends a request for receiving medical image data related to a predetermined examination out of image data stored in the

25   server, image data as requested by the client,

outputting through the client the medical image data sent

by the server, and

causing the server to automatically output accounting information for medical facilities, the accounting information including a data fee determined examination by

5　examination.

58. A method as defined in Claim 57 further comprising the steps of

determining an available range purpose by purpose, and

determining the data fee examination by examination and

10　purpose by purpose.

59. A method as defined in Claim 57 further comprising the steps of

storing image reports on the medical image data in the server,

15　sending, to the client, medical image data as requested by the client together with the report on the medical image data, and

outputting, from the client, medical image data as requested by the client together with the report on the medical

20　image data.

60. A medical information output system comprising

a plurality of clients each of which is equipped in a medical facility and is provided with an image output means which receives medical image data by way of a network and

25　outputs as a visible image the medical image data received, an electronic patient's chart storage means which stores data

on the patient's chart, and an electronic patient's chart output means which outputs data on the patient's chart stored in the electronic patient's chart storage means, and

a server which is connected to the clients by way of the

5 network and is provided with an image storage means which stores medical image data, wherein the improvement comprises that

each of the clients is provided with a liaison output means which causes the electronic patient's chart output means and the image output means to output in liaison with each other,

10 and the liaison output means causes the electronic patient's chart output means and the image output means to output data on the patient's chart and medical image data corresponding to the patient's chart by the use of liaison information which relates the patient's chart and the medical image data with

15 each other.

61. A medical information output system as defined in Claim 60 in which

each of the clients is provided with a function of sending a request for receiving medical image data out of image data

20 stored in the image storage means to the server,

the server is provided with a function of sending image data to the client which sends the request in response to receipt of the request, and

the liaison output means selects medical image data on

25 the basis of the patient's chart output from the electronic patient's chart output means by the use of liaison information,

sends a request for receiving selected medical image data to the server and causes the image output means to output the medical image data sent from the server upon receipt of the request.

5   62. A medical information output system as defined in Claim 60 in which

each of the clients is provided with a function of sending a request for receiving medical image data out of image data stored in the image storage means to the server,

10   the server is provided with a function of sending image data to the client which sends the request in response to receipt of the request, and

the liaison output means selects patient's chart on the basis of the medical image data received from the server by

15   the use of liaison information, and causes the electronic patient's chart output means to output the selected patient's chart.

63. A medical information output system as defined in Claim 60 in which

20   each of the clients is provided with a function of sending a request for receiving medical image data out of image data stored in the image storage means to the server,

the server is provided with a function of sending image data to the client which sends the request in response to

25   receipt of the request, and

the liaison output means is provided with a function of

selecting medical image data on the basis of the patient's chart output from the electronic patient's chart output means by the use of liaison information, sending a request for receiving selected medical image data to the server and causing the image output means to output the medical image data sent from the server upon receipt of the request and a function of selecting patient's chart on the basis of the medical image data received from the server by the use of liaison information and causing the electronic patient's chart output means to output the selected patient's chart.

64. A client for a medical information output system as defined in Claim 60 comprising

an electronic patient's chart storage means which stores data on the patient's chart,

an electronic patient's chart output means which outputs data on the patient's chart stored in the electronic patient's chart storage means,

a data sending means which sends a request for receiving medical image data out of image data stored in a server connected thereto by way of a network,

a data receiving means which receives, from the server, medical image data as requested by the request for receiving medical image data sent by the data sending means,

an image output means which outputs as a visible image the medical image data received by the data receiving means, and

a liaison output means which causes the electronic patient's chart output means and the image output means to output in liaison with each other, wherein

the liaison output means selects medical image data on

5 the basis of the patient's chart output from the electronic patient's chart output means by the use of liaison information, causes the data sending means to send a request for receiving selected medical image data to the server and causes the image output means to output the medical image data sent from the

10 server upon receipt of the request.

65. A client for a medical information output system as defined in Claim 60 comprising

an electronic patient's chart storage means which stores data on the patient's chart,

15 an electronic patient's chart output means which outputs data on the patient's chart stored in the electronic patient's chart storage means,

a data sending means which sends a request for receiving medical image data out of image data stored in a server

20 connected thereto by way of a network,

a data receiving means which receives, from the server, medical image data as requested by the request for receiving medical image data sent by the data sending means,

an image output means which outputs as a visible image

25 the medical image data received by the data receiving means, and

a liaison output means which causes the electronic patient's chart output means and the image output means to output in liaison with each other, wherein

the liaison output means selects patient's chart on the basis of the medical image data received from the server by the use of liaison information and causes the electronic patient's chart output means to output the selected patient's chart.

66. A client for a medical information output system as defined in Claim 60 comprising

an electronic patient's chart storage means which stores data on the patient's chart, an electronic patient's chart output means which outputs data on the patient's chart stored in the electronic patient's chart storage means, a data sending means which sends a request for receiving medical image data out of image data stored in a server connected thereto by way of a network, a data receiving means which receives, from the server, medical image data as requested by the request for receiving medical image data sent by the data sending means, an image output means which outputs as a visible image the medical image data received by the data receiving means, and a liaison output means which causes the electronic patient's chart output means and the image output means to output in liaison with each other, wherein

the liaison output means is provided with a function of selecting medical image data on the basis of the patient's chart

output from the electronic patient's chart output means by the use of liaison information, sending a request for receiving selected medical image data to the server and causing the image output means to output the medical image data sent from the

5   server upon receipt of the request and a function of selecting patient's chart on the basis of the medical image data received from the server by the use of liaison information and causing the electronic patient's chart output means to output the selected patient's chart.

10   67. A server for a medical information output system as defined in Claim 60 comprising

an image storage means which stores medical image data,

a data receiving means which receives a request for receiving medical image data related to a predetermined

15   examination out of image data stored in the image storage means from a client connected thereto by way of a network, and

a data sending means which sends, to the client, medical image data as requested by the request for receiving medical image data received by the data receiving means.

20   68. A program for causing a computer to execute processing of outputting data on the patient's chart stored in a client,

processing of selecting medical image data on the basis of the patient's chart output from the electronic patient's

25   chart output means by the use of liaison information,

processing of sending a request for receiving selected

medical image data to a server connected thereto by way of a network,

processing of receiving, from the server, medical image data as requested by the request for receiving medical image data, and

processing outputting the medical image data sent from the server.

69. A program for causing a computer to execute

processing of sending a request for receiving medical image data out of image data stored in a server connected thereto by way of a network,

processing of receiving, from the server, medical image data as requested by the request,

processing of outputting as a visible image the medical image data received,

processing of selecting patient's chart on the basis of the medical image data received from the server by the use of liaison information, and

outputting the selected patient's chart.

70. A program for causing a computer to execute

processing of storing medical image data,

processing of receiving a request for receiving medical image data out of image data stored in the image storage means from a client connected thereto by way of a network, and

processing sending, to the client, medical image data as requested by the request for receiving medical image data

received.

71. A medical information output method comprising the steps of

storing data on patient's charts in each of clients equipped in medical facilities,

storing medical image data related to the patient's charts in a server connected to the clients by way of a network, and

causing each of the clients to automatically receive medical image data related to data on a patient's chart to be output and to output the medical image data together with the patient's chart.

72. A medical information output method comprising the steps of

storing data on patient's charts in each of clients equipped in medical facilities,

storing medical image data related to the patient's charts in a server connected to the clients by way of a network, and

causing each of the clients to automatically select data on a patient's chart related to medical image data to be output and to output the selected patient's chart together with the medical image data.